## REMARKS

In the Office Action, the Examiner noted that claims 1-15 and 17-31 are pending in the application and that claims 1, 3-4, 6-9, 11-13, 15, 17, 19-20, 22-25, 27-29 and 31 stand rejected. The Examiner further noted that claims 2, 5, 10, 14, 18, 21, 26 and 30 are objected to. By this response, claims 14-15 and 30-31 have been amended and claims 11-13 and 27-29 have been cancelled.

In view of the amendments presented above and the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. Thus the Applicant believes that all of these claims are now in allowable form.

### Rejections

**A. 35 U.S.C. § 102**

The Examiner rejected claims 1, 3-4, 6-9, 11-13, 15, 17, 19-20, 22-25, 27-29 and 31 under 35 U.S.C. § 102(e) as being anticipated by Mercier (U.S. Patent 6,865,747). The rejection is respectfully traversed.

The Examiner alleges that Mercier discloses a video reproduction apparatus that shows all of the limitations of the Applicant's invention. The Applicant respectfully disagrees.

### Claim 1

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrik Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant respectfully submits that the Mercier reference fails to teach, suggest or anticipate each and every element of at least the invention as recited in the Applicant's claim 1, which specifically recites:

> "A method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures, comprising the steps of:
> in response to a trick mode command, **selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal**; and
> selectively inserting at least one dummy predictive picture in the trick mode video signal." (emphasis added).

In the Final Office Action, the Examiner alleges that the feature of repeating one original picture to convert a video signal to a trick mode video signal is inherent in the invention of Mercier because Mercier discloses that an empty picture that is inserted in the trick mode video signal has the characteristic of a reference picture (original picture). In fact, the Examiner cites Mercier col. 10, lines 25-28 and col. 2, lines 59-63 and FIG. 13 for teaching the repeating of original pictures in creating the trick mode video data. The Applicant respectfully and adamantly disagrees.

More specifically, in col. 10, lines 25-28, Mercier specifically recites:

> "An empty frame has null motion vectors, no residual data coded (coded block pattern is 0) and has the property of repeating the content of one of the reference frames." (See Mercier, col. 10, lines 25-28).

Furthermore, in col. 2, lines 59-63 Mercier specifically recites:

> "In yet a further aspect of the invention, the apparatus further includes a trick mode processor that can: create a slow motion effect by inserting empty predictive frames into a video elementary stream between picture frames;" (See Mercier, col. 2, lines 59-63).

As evidenced by at least the portions of the disclosure of Mercier referenced by the Examiner and cited above, the Examiner is attempting to use the teachings of Mercier for inserting an empty predictive frame into a video stream to create a slow motion effect as taught in Mercier to anticipate the teachings and claims of the Applicant's invention for "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command. The Applicant respectfully submits that it is very clear to those skilled in the art that creating a trick mode signal by inserting an empty predictive frame into a video stream as taught in Mercier does not anticipate, teach of make obvious "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command as taught and claimed by the Applicant.

More specifically, it is very clear to those skilled in the art that an empty predictive frame is not an original picture. An empty predictive frame may comprise a copy of a reference or original picture, but has very different properties

of an original picture. For example, using an empty predictive frame in a video signal for converting the video signal to a trick mode video signal creates very different results than "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command as taught and claimed by the Applicant at least with regards to resolution of the resultant signal, space required by the resultant signal and the bit rate of the resultant signal, just to name a few. In addition, an empty predictive frame is less useful for predicting pictures than an original picture. There are many more reasons known to those skilled in the art why using an empty predictive frame in a video signal for converting the video signal to a trick mode video signal as taught in Mercier does not anticipate and creates very different results than "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command as taught and claimed by the Applicant.

In addition, the Examiner points to FIG. 13 of Mercier for anticipating the invention of the Applicant at least with regards to claim 1. FIG. 13 of Mercier illustrates the teachings of Mercier for inserting empty B frames into a video signal to create a slow motion or pauses effect. Again, the Applicant respectfully submits that inserting empty B frames into a video signal to create a slow motion or pauses effect fails to teach, suggest or anticipate "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command as taught and claimed by the Applicant for at least the reasons recited above. Although an empty B frame may comprise a copy of an original picture, an empty B frame does not comprise the same features and aspects as and is not the same as an original frame; and inserting empty B frames into a video signal to create a slow motion or pauses effect fails to teach, suggest or anticipate "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" in response to a trick mode command as taught and claimed by the Applicant.

In more detail, the Applicant's invention is directed at least in part to a method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including at least selectively repeating at

least one of the original pictures to convert the video signal to a trick mode video signal in response to a trick mode command. More specifically, in support of at least claim 1, the Applicant in the Specification specifically recites:

> "The method includes the steps of: in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal; and selectively inserting at least one dummy predictive picture in the trick mode video signal." (See Applicant's Specification, page 3, lines 3-7).

And

> "At step 212, a trick mode command can be received. For purposes of the invention, the trick mode command can be any command in which one or more of the original pictures are to be repeated including a pause or freeze command or a slow motion command. As shown at decision block 213, it can be determined whether at least one of the original pictures is to be repeated. If so, then at least one of the original pictures can be selectively repeated, as shown at step 214. This selective repetition converts the video signal to a trick mode video signal." (See Applicant's Specification, page 10, lines 6-13).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention is directed, at least in part, to a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including **selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal** such as a pause or freeze command or a slow motion command.

The Applicant respectfully submits that Mercier fails to teach, suggest, disclose or anticipate each and every element of the claimed invention, arranged as in at least the Applicant's independent claim 1. That is and as recited above, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Mercier for a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including **selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal** such as a pause or freeze command or a slow motion command. That is, Mercier absolutely fails to teach, suggest or anticipate "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video

signal" as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 1.

Instead, Mercier teaches an apparatus and method for storing and playing high definition content. In Mercier, the invention provides a mechanism for storing and playing back high definition content on a medium such as DVD optical disc. (See Mercier, Abstract). The Examiner alleges that in column 10, lines 25-28, Mercier anticipates the limitation of repeating original pictures to form a trick mode as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. The Applicant disagrees. In support of the invention and as pointed out by the Examiner, in column 10 Mercier specifically recites:

> "Trick modes may be achieved by extracting MPEG-2 video elementary frames using search algorithms. The frames may be converted to a valid MPEG-2 video elementary stream by adjusting headers, like the temporal reference fields of picture headers and by inserting empty P frames or empty B frames. An empty frame has null motion vectors, no residual data coded (coded block pattern is 0) and has the property of repeating the content of one of the reference frames." (See Mercier, col. 5, lines 21-42). (emphasis added).

As evident from at least the portions of the disclosure of Mercier presented above, Mercier teaches that trick modes are achieved by extracting MPEG-2 video elementary frames. This is, the teachings of Mercier are in direct contrast to the invention of the Applicant at least with respect to independent claim 1, which specifically teaches and claims "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal". Mercier further teaches that the remaining frames in the video stream can be converted to a valid MPEG-2 video elementary stream by inserting empty P frames or B frames to fill-in the missing spaces to generate a valid number of frames per second and not to form the trick mode video signal. That is, in Mercier a trick mode video signal is formed by extracting MPEG-2 video elementary frames (i.e., for fast motion) and not by "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" (i.e., for slow motion) as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

As such and at least because the teachings of Mercier fail to teach, suggest or anticipate at least a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 1, the Applicant respectfully submits that the teachings and disclosure of Mercier do not anticipate the Applicant's invention, at least with respect to claim 1. That is, Mercier fails to disclose each and every element of the claimed invention, arranged as in the Applicant's claim 1 as required for anticipation.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 1 is not anticipated by the teachings of Mercier and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, independent claims 10, 17 and 26 recite similar relevant features as recited in the Applicant's independent claim 1. As such, the Applicant submits that for at least the reasons recited above independent claims 10, 17 and 26 are also not anticipated by the teachings of Mercier and also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Furthermore, dependent claims 2-9 and 18-25 depend either directly or indirectly from independent claims 1 and 17 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 2-9 and 18-25 are also not anticipated by the teachings of Mercier. Therefore the Applicant submits that dependent claims 2-9 and 18-25 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

**Claims 10 and 26**

The Applicant agrees with the Examiner that the Applicant's independent claims 10 and 26 are patentable.

**Claims 11-13**

Claims 11-13 have been cancelled herein.

**Claims 14-15**

In the Final Office Action, the Examiner noted that claim 14 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, the Applicant has herein amended claim 14 to be in independent form including all of the limitations of the base claim and any intervening claims. Having done so, the Applicant respectfully submits that claim 14 is allowable and respectfully requests that the Examiner's objection to claim 14 be withdrawn. Furthermore, dependent claim 15 now depends directly from independent claim 14 and recites additional features therefor. As such and for at least the reasons set forth with respect to claim 14, the Applicant submits that dependent claim 15 is also allowable.

**Claims 27-29**

Claims 27-29 have been cancelled herein.

**Claims 30-31**

In the Final Office Action, the Examiner noted that claim 30 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, the Applicant has herein amended claim 30 to be in independent form including all of the limitations of the base claim and any intervening claims. Having done so, the Applicant respectfully submits that claim 30 is allowable and respectfully requests that the Examiner's objection to claim 30 be withdrawn. Furthermore, dependent claim 31 now depends directly from independent claim 30 and recites additional features therefor. As such and for at

least the reasons set forth with respect to claim 30, the Applicant submits that dependent claim 31 is also allowable.

Conclusion

The Applicant would like to thank the Examiner for pointing out allowable subject matter. The Applicant has herein amended various claims to be in allowable form as suggested by the Examiner.

As such, the Applicant respectfully submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,
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